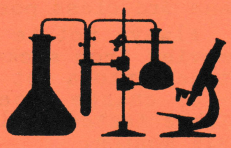
MRL RADIO FLYER

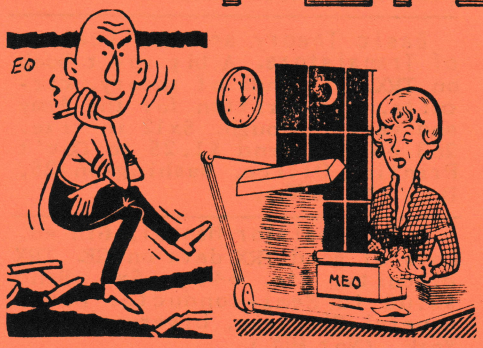
No. 15

Modern Radio Laboratories
1131 Valota Road,
Redwood City, Calif., U.S.A.
Phone EMerson 6-1983

Lithographed in
U.S.A. by M-R-L



FOR THE EXPERIMENTER



MRL STATIC CRASHES - Aug., 1962.

At this writing, the old static is really rolling in. Auto Radios in the high mts. are almost out of the question. But, It'll soon be DX season again, and we can get down to biz. One thing about short waves - we can really go over to them in the summer and have a lot of fun. You probably watch the mags. for the best DX zones at certain times of the day. We hope you have plans to overhaul that Aerial system and look for loose joints from there to the ground.

We have cooler weather, along the Coast, than you fellows inland. San Francisco had the coolest July in 61 years - but it really feels good after coming from the 100 deg. in the valleys. Redwood City is 23 mi. so. of SF - behind a little mountain range that allows it to warm up some. Ironically, we bought a $65 air-conditioner, to keep cool, on June 21st, and we haven't used it since! But, fall hot weather will soon be here anyway.

We've also spent a lot of time stuccoing, painting and landscaping around here (while we're resting!)

While trying to make ourselves comfortable - we've also been making over some kits, plans, CAT. revisions, etc., as well as getting stock ready for the DX season. This is the easiest spot you ever saw for finding something to do!

Best 73 - Elmer G. (EO) and
Mabel E. (XYL) Osterhoudt.

PUT UR NAME AND ADDRESS on the outside of your envelope for Ur own protection.

CANADIANS.
The bank takes 10% off on all Canadian bills or silver. Please allow for this. Canadians say they still do better at MRL.

Recommended Reading for Every RADIO FAN.

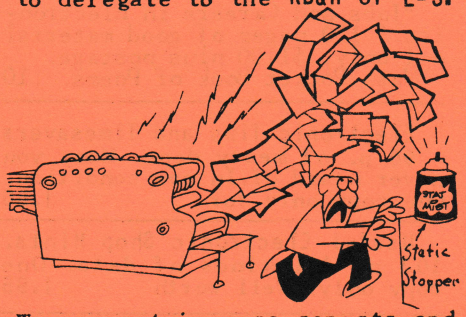
To save time - some Fans would like a quick summary of MRL-written literature for quick ordering. We have the following ready for immediate delivery:

13	MRL Handbooks at 50¢....	6.50
2	MRL DP Files 1, 2 at $1.	2.00
3	MRL DS Vol. 1, 2, 3 at 30¢	.90
20	Back numbers of RB&H....	3.50
2	E-S No. 1, 2 at 25¢.....	.50
2	DP-27, 44 litho'd.....	.20
25	DPs, mimeographed at 7¢.	1.75
	Total	15.35

Add postage. Also 4% sales tax if you live in California.

NEW MRL FLYER ARRANGEMENT.

Guess you sense the new revised layout of the Flyer. A change - now and then, is always welcomed. So, we decided to throw in some "chit-chat" that we used to delegate to the RB&H or E-S.



We may get in more reports and little local and distant items we find interesting. We hope this contact will be more friendly than most mail-order firms that are only coldly interested in relieving you of your bankroll!

MRL CLASSIFIED ADS

will be discontinued as soon as these run out.

STAMP Collectors - a nice packet U.S. stamps - 25¢ - request approvals. Smith, 2 Village Road, Pompton Plains, New Jersey. (3-16)

DIODE and Transistor Experimenters - write Wilburn W. Clay, 1803 Childress Drive, S.W., Atlanta 11, Georgia. (3-16)

MRL RADIO CATALOG.

This summer we have revised several MRL CAT. sheets - and a few more will be made over later this year. Much material has been "lifted" from the Flyer and put

into CAT. We are automatically sending out a new CAT. to all buyers of parts or literature. Others may have a CAT. FREE- but we do appreciate 10¢ as mailing cost. Thanks.

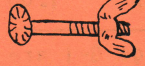
Hardware

BINDING HEAD MACHINE SCREWS.		doz.
2-56 x 3/8" BH.	13-91.	.10
6-32 x 1/8" " .	13-173.	.10
6-32 x 5/16"" .	13-171.	.11

FLAT HEAD MACHINE SCREWS.		doz.
2-56 x 1/2" FH	13-29.	.09
3-48 x 1/4" FH.	13-186.	.09
4-40 x 3/8" " .	13-12.	.09

FLAT HEAD WOOD SCREWS.		doz.
#2 x 3/4" FH wood.	13-81.	.10

#10 x 1" SCREW & WINGED NUT.



Neat screw with ornamental head. Tinned winged nut to fit. For fastening chassis to your panel or cabinet.
13-90. Screw & Nut. 2 for .05

Shoulder washers. Fit over 3/8 inch shaft as VC, etc. Brand new stock. CAT. 13-114. Dozen.....12
Shoulder washers go into 1/4" hole or #10 screw size. Insulate UR chassis. 13-128. Dozen.....11

1/4" Rubber Grommets. New price. Going up. 13-129. dozen. .20

TRIMM PROFESSIONAL PHONES are now called Dependables. All the same otherwise. CAT. P-1.

Tubes & Accessories

TUBE BASES. We can only use 4-5-6 prong, 1-3/8" dia. and long prongs. No credit on short prong UV-201A, etc. We allow 2¢ each, and 3rd class postage on others.

Always rotate tubes when removing from sockets. Don't plug tubes into a set with current on - or change tubes around. Have tubes tested at least once every six months.

Note: Pentode power amp. tubes, as 1C5gt, etc. make excellent detectors or amp. RF tubes also make good detectors.

TUBE SUBSTITUTIONS.

Checking your tube manual, you can find lots of duplicates that may be changed without rewiring. A 1U4 works as a 1T4; 1C5 as a 1Q5; 6C5 for 6J5; 5W4 for 5Y3; etc. Our circuits may call for a 201A. Use a 30 instead, but put a 10 ohm wirewound in series to cut from 3 to 2 volt battery.

Sams, 2201 E. 46th St., Indianapolis, Ind. has a 96 p. book on direct substitutions for many tubes for $1.50. (Not MRL)

161 TUBE TYPES shown in our revised CAT. sheet T-1. Many old types not obtainable elsewhere will not be re-stocked. Get copy of latest CAT. now - 10¢ please. O R - FREE with next order.

EASIER to SORT RESISTORS. When you order an assortment of resistors - we're hooking them on a card - and marking, so you won't have to check colors. Just another of MRL services to you!

DPST TOGGLE SWITCHES, CAT. E-2 no longer obtainable at a good price. We are now substituting DPST slide switches at 30¢. Make them CAT. number 23-5.

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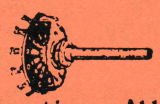
11 POSITION INDUCTANCE SWITCH.



1-hole mounting. Allows you to mount switch behind panel. Easy soldering to lugs. Also OK for stereo, Hi-Fi, etc. ¼" shaft by 1-3/4" long. 9-36. Each 1.00

LOOPS, CAT. 1-42, page G-1 are 6x10 and 6x12 in size. .50

NEW COIL DATA.

On MRL 20 meter plug-in coils, we now specify 4 turns #22 DCC, spaced 3/16" over all. Cement holds the wire firmer. Also, theoretically, DCC has less loss than enameled - they tell us!

ERROR IN CATALOG. CAT. 8-86.
(ok in this Flyer- page 8)

On page J-1, just revised, we should have said "3/8" shaft for 1" - and then ¼" shaft" - for the 2-gang .00035, CAT. 8-86.

PUBLICATIONS

DUPLICATE MAGAZINES.

These are in good readable condition, and all we have at present. If you order parts with them - you usually save on your postage. Most are not obtainable - even from publishers. We don't buy used mags. - so do not send them. Please give first and 2nd choice. Postage extra.

Radio-TV News. July-Aug-Nov., 1954; Jan-Apr-June-Sept., 1955: Each.....35

Electronics World. June-,1959. Each.....35

Radio Electronics. Dec.,1954; Mar-May-June- Sept- -Nov., 1955; July- -Nov., 1958.....35

Feb- 1961; Feb.-Mar-Apr., Aug-Sept.,1962 Each .50

Radio Chassis. Argentina, in Spanish. Oct-Dec., 1956.....50

Radio-TV Service Dealer. Mar-Apr-Nov.,1955; Sept-Nov., 1956. 15

Popular Science. Dec., 1953; June,1955; Sept., 1957.....15

Mechanics Illustrated. July-1954; Sept-Oct-Nov., 1955.....15

Science & Mechanics. Apr., 1953 Oct-Dec., 1954; Feb-Apr-June, 1955 June, 1960. Jan., 1961.....25

Electronic Technician and TV. Aug-Sept (stereo)-Oct-Nov, 1960; Jan-Feb-Mar-Apr-June-Sept (stereo), Oct-Nov-Dec, 1961; Jan-Feb.-Mar.Apr.1962. Reg. 60¢ .35

PF (Photofact) Reporter. Sept. 1960.....25

Home Craftsman. June, 1960; Feb., 1961.....35

"Jobs and Careers in Electronics." 130 pages of good material - 1 only. $1.00 plus postage.

Nash Pocket Book of Poems. .10

Electronic Tips and Timesavers - 96 p. of meaty dope. Many you never heard of. In new condition. One copy only for 1.50

Useful Electronic Shop Hints. 103 p. All kinds of data. One copy only. Well worth 1.95

NEW POSTPAID PRICES ON Editors & Engineers' books.

Radio Handbook. 15th.....8.50

Surplus Radio Conversion Manuals. #1, 2, 3, each...3.00

Surplus Handbook #1 on Receivers & Transceivers....3.00

*On Surplus manuals - we have the index for all of them. Advise which circuit you wish and we'll advise which volume you need.

Radiotelephone License Manual. 2nd edition.....5.75

World's Radio Tubes.....6.00

" Equivalent Tubes....6.00

" TV Tubes.....6.00

Slightly higher in Canada due to postage differences. See CAT. for further descriptions.

Above EXE Ppd. From MRL

Library of History and Popular Science. 1906. Lots of good material. 23 volumes. We'll ship book rate. $5 for lot & postage.

Standard American Encyclopedia 1939. 15 volumes in perfect condition. $5 for lot and postage.

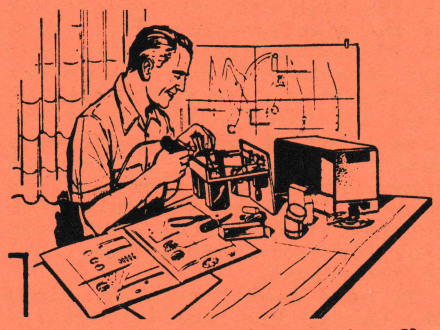
New Master Pictorial Encyclopedia. 1955.8 handy-sized books. Good condition. $5 for lot, plus postage at book rate.

Basic Theory and Application of Transistors. A big gov't book on TRX. All kinds of theory, circuits, etc. Written for the Army and very thorough. 8x12 in size. 263 pages. Send $1.25 to Gov't Printing Office, Washington 25, D.C. (Not MRL).

G. E. Transistor Manual, 6th ed. Lots of good TRX data on GE. TRX circuits, etc. 440 p. 6x9. Send $2.00 to Semi-conductor Div., General Electric, Liverpool, New York. (Not MRL).

NEW MRL HANDBOOK NO. 12.

RADIO WORKBENCH TIPS.



We are now working on it. You may send 53¢ for future delivery if you wish. Give us a little time as it is now being put together, which is a slow process. The usual 24 pages. More on HB-12 later on in next Flyer. Lots of real hot tips you'll like.

SUBSCRIBERS to E-S: Do not send money for HB-12 - it will come to you automatically as E-S #3 and 4, at no additional cost. This will help to complete your subscription to E-S.

STATUS OF MRL DPs.

MRL DP Files 1 and 2, litho'd plans at $1.00 each (CAT. D-1).

MRL DP File no. 3 not ready.

Revised DPs #18 (MRL QRM Coil TRX Set) and DP-27 (MRL #15 Xtal Set) described on Flyer p.6.

Revised DP-44 (MRL #29 Variometer Xtal Set) see Flyer p. 8.

Also 25 mimeo'd plans at 7¢, see CAT. page D-3.

Original DP file CAT. 5-1, of 46 plans (some litho'd), wt. 12 oz. Only one left at 1.25

New ones, and revisions made up as time permits. This summer we have been busy with other literature work, etc. Keep on our Flyer list by making an occasional purchase.

"A Pictorial Album of Wireless and Radio -- 1905-1928"

222 pages

A newly published volume in Floyd Clymer's Americana collection, A PICTORIAL ALBUM OF WIRELESS AND RADIO—1905-1928, is another historical 'first' for this firm. The Album which contains more than a thousand actual photographs of operating wireless and radio equipment has been compiled around the unique collection of broadcast, receiving and experimental equipment belonging to Harold S. Greenwood, Arcadia, California. This collection of several thousand individual components and complete units is unique, and represents, as far as is known, the largest such grouping of historical radio material in the world. Each component is in operable condition and has been fully and authentically restored to new-like appearance.

Since his High School days, Greenwood has been an ardent radio amateur broadcaster and operated a radio parts wholesale establishment for more than 25 years. His interest in the preservation of typical pieces of equipment dates from his youth and the concise historical notes which accompany the photographs are his personal recollections in many cases.

In addition to photographs of this fabulous collection a selected number of advertisements, dating as far back as World War I, representing the leading firms and their products have been reproduced. Radio Corporation of America, Marconi, Tuska, DeForest, Atwater Kent and Crosley are a few of the pioneer firms whose receiving sets are shown and which will certainly stir nostalgic feelings in the generation which sat up till 2:00 AM "getting Des Moines," "tuning in Honolulu," or the K.C. Night Hawks or Amos and Andy. Crystal sets, Headphones, Battery Eliminators, Loop Antennas, The E. I. Co., Superheterodyne, Neuterodyne and Spark Transmitters are other subjects calculated to set memories in motion. A collector's dream.

Both as sheer entertainment and an educational documentary, the Album of Wireless and Radio deserves a place on every Americana bookshelf.

This is really quite an historical book. Just chock full of pictures of old familiar rigs. We get nostalgia when we look at it. Old Timers will have lots of fun discussing it and the "good old days of Radio and Wireless." Postpaid from MRL at $3.00

OTHER FLOYD CLYMER PUBLICATIONS

for sale by MRL. All postpaid.

SOUPING THE STOCK ENGINE

Explains full the 5 PATHS TO POWER. Covers everything from road to track engines. Effective theories on speed tuning. Tells you HOW and WHY . . . how to get the most from your "souping" dollar. Complete data on speed tuning of ALL MAKES OF STOCK ENGINES. Best book on speed ever written! 150 photos, charts, fuels, drawings. Every speed enthusiast will want this complete manual of speed by Roger Huntington. 192 pages.....Postpaid $2.00

FORD SPEED MANUAL

This NEWLY REVISED book with 90 charts, photos, construction drawings and graphs deals with road cars . . . track jobs . . . hot rods . . . lake cars . . and with speed tuning of all Ford cars . . . V-8, six cylinder and A and B models. Also tells how to speed-tune Mercury and Lincoln cars. Writtten so the layman can understand it but with technical data included. Information includes data on carburetion . . . ignition . . . compression, exhaust systems . . cams . . . supercharging . . . hot rod engines . . . how to build an all-out engine . . . rebuilding the V-60 for speed . . . how to hot-rod the Ford Six . . . hot rodding the A and B Fords . . . hot rodding the Lincoln Zephyr and V-8 . . . alcohol fuel and why . . . fuel delivery systems . . . gauges for hot rod engines . . . building an A-V-8 (conversions) . . . lowering and full data on channeling, porting and relieving . . . building a track job . . . gear ratios . . . fuel injection . . . bore sizes . . . balancing, chassis dynamometer tuning . . . stroking . . . column shifts and dozens of other "how to do it" hints and tips, and complete preparation information. Interesting illustrations of world-famous cars plus details of their design and consruction. This book is the answer to every speed and tune-up question. Different than any other speed book. Postpaid $2.00

HOW TO HOP UP FORD AND MERCURY V8 ENGINES

An outstanding handbook dealing specifically with the "souping" or speed tuning of all Ford and Mercury V8 engines, compiled by Roger Huntington. Over 120 authentic graphs, charts, photos, as well as a complete history of Ford V8 engines are included. Tells how to get the most for your money in speed equipment. Discusses short cuts to increasing power output and how to plot results. 160 pages.
Postpaid $2.00

THE SPORTS CAR ENGINE

A book full of interesting and informative data specifically about the care and repair of the sports or competition engine. For owner, driver—and all motor enthusiasts.
Postpaid $1.50

THE MODERN CHASSIS

A very informative handbook with interesting, valuable data concerning all phases of chassis construction, modern practices in suspension, shock absorbers, steering, weight distribution, and allied subjects. Deals with U. S. and foreign cars. A very handy book for the sports car enthusiast, hot rod, or stock car owner. 112 pages illustrated with over 160 charts, drawings, photos. Attractive 3-color cover.
Postpaid $2.00

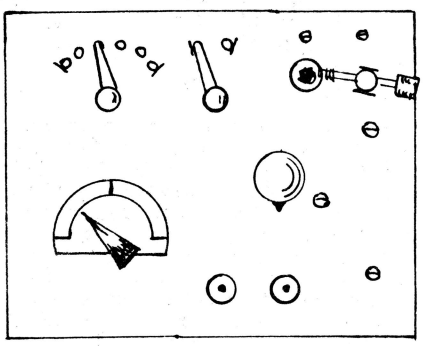
CHEVROLET SPEED MANUAL

Fully revised 1954 edition of this comprehensive handbook on speed tuning of Chevrolet and GMC engines, by California Bill." Clearly written for the hot-rodder with complete how-to-do-it information and nearly 100 sharp illustrations, construction drawings and graphs with specific data and valuable hints and tips. Chapters include: Dynamometer tests . . . How to build your Chevy engine . . . Equipping your Chevy with a racing cam . . . How to select a cam . . . cam functioning . . . valve components . . . pistons and piston rings . . . special heads . . . reworking your Chevy head . . . ignition . . . dual-point ignition . . . oil system . . pressure oiling . . . gear ratio . . . flywheel chopping . . . reworking GMC engines . . . rebuild Buick for speed . . . tuning your engine . . . exhaust systems . . . fuel . . . water injection . . . trouble finding . . . driving your hopped up car. 128 pages.....Postpaid $2.00

ABC's of Lubrication	$2.00
Aircraft, The World's Famous Racing	1.50
Air-Race Sketchbook, National	2.00
American Horse-Drawn Vehicles	2.00
Antique Car Repair Handbook	2.50
Ariel Motorcycle Owner's Handbook	1.50
Around the World With Motorcycle Camera	2.50
Auto Owner's Handbook	2.00
Bicycle Owner's Handbook	1.00
British Car Owner's Handbook	2.00
British Motorcycle Engines	1.50
Car Owner's BASIC Handbook	3.00
Cars of the Stars and Movie Memories	2.50
Car-Toons, Book of	1.00
Cast Iron Wonder, The	3.00
Catalog of 1909 U.S. Cars	3.00
Catalog of 1912 U.S. Cars	2.50
Catalog of 1914 U.S. Cars	3.00
Catalog of 1918 U.S. Cars	2.50
Catalog of 1921 U.S. Cars	3.00
Catalog of 1924 U.S. Cars	3.00
Catalog of 1927 U.S. Cars	2.50
Catalog of 1929 U.S. Cars	2.50
Chevrolet Owner's Handbook	2.00
Cord Front-Drive, The	3.00
Corvair Owner's Handbook	4.00
Corvette Owner's Handbook	5.00
Engine Swapping	2.00
Ferrari Owner's Handbook	4.00
Fill'er Up (the story of 50 years of motoring)	3.00
Ford Model "A" Album	3.00
Ford Model "A", How to Restore the	3.00

More listed next issue of Flyer.

MRL REVISED #10 DIODE-TRX SET.



In last Flyer we gave data on this revised set. Many have sent for it - kit or wired, even tho it was summer. We are looking 4 some good DX records this winter on this rig. You sure have the power to bring them in - once the crystal snags them. See CAT. K-2 for details. Also testimonial on our original #10 on page 7 of this Flyer. The circuit is the same - except that we have added a 1-stage TRX controlled amplifier and a little different panel layout.

14-7. MRL #10 Kit. 2 lbs.	8.50
14-7-W. Same wired	10.50
New DP-34, by itself	.10

WE OFTEN SAVE YOU ON POSTAGE.

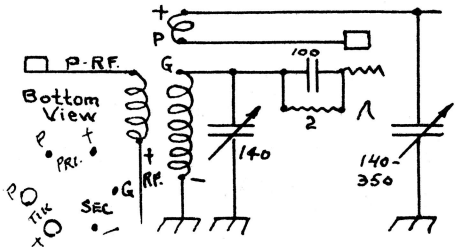
Most all other concerns, we have dealt with, pay no attention to saving you postage. We recently got 6½ lbs. of parts and they were put into a 5½ lb. box. It could have been put into a 1-pounder. If your package is 15 oz. to New York - it costs you 23¢. If 16 oz. it costs you 64¢- quite a difference! In this case - we'd put it in 2 boxes. If - adding an MRL CAT. brings it slightly over pound rate - we send it separately and pay for the postage. How many big concerns would do this for you? We also build up packages with free literature- so you aren't paying extra for this stuff.

LIKES MRL.

Bob Gray, Calif.: "I think your company is great. Even your CAT. is full of info. Keep up the good work." Thanks, Bob.

Coils

SOME NEW MRL COILS. TYPE E.



We can now build 6-prong coils to fit above diagram for same price as Types O or B (See CAT.) This is a hi-impedance primary like Type O but with secondary & tickler like Types A, 5-A and B. Secondary may be tuned with a .00014 or a .00035 and trimmer in series. A .00014 makes a good regeneration control (see DP-29) for DX. The primary isolates the secondary for quiet tuning on SW bands. Quite a few 6-prong forms on hand, but appreciate it if you would send some for credit.

7-184.	4 E SW coils. 8 oz.		3.50
	Single bands each		1.00
7-185.	E HF-BC	4 oz.	1.00
7-186.	E Broadcast.	"	1.00
7-187.	E LF-BC.	"	1.00
7-188	E Long Wave	6 oz.	1.25

See CAT. E-2 about sending us used tube bases. We can use 4-5-6 prong of 1-3/8" dia. only. We allow 2¢ credit on each base and postage paid at 3rd or 4th class rates. Just break off the glass, and snip off the wires. Do not clean out the glass or hit the base with hammer. While we seem to have a good supply - we can always use more. Most Radio shops have them in the junk box FREE!

IC METER COILS, DP-31. 10 m. coils may be made for this set with 3 turns #20, close-wound, & tapped at 1. Oscillates fine down there. We make them for 75¢. Be sure to give type.

On DP-31 drawing, coils are 5-C, as listed in Parts list.

NEW COIL COLORS

We are now using the following bright colors for our plug-in coils: 20 m. lite blue; 40 meter orange; 80 lite green; 160 red; HF-BC silver; BC white; LF-BC gold; Long wave yellow. Colors quickly identify the bands. Many changes have been made since we started making them in 1932.

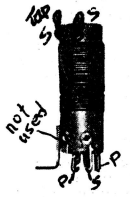
REMIT in any convenient form. We are easy to get along with!

LET'S GET STRAIGHT TO THE POINT...

Out comes your card - if you don't buy. So many new ones always coming in - that Flyers get REAL scarce. A small order can keep them coming to you.

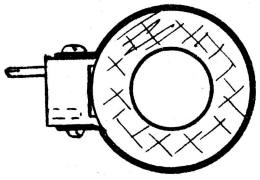
However, if for some reason U are not interested at present, get in touch with us later - Alligator! Once a Radio Fan - always one - so we know you'll be back. We been in this mail-order biz since 1932. Never got the hankerin' to get out - a REAL DEEP bite by that Radio Bug in 1915 did it. Ain't it grand?

NEW ANTENNA COILS.



Close-coupled, or inter-wound. Secondary is tapped. OK for Xtal sets. Only 5/8" x 1½" long & a mounting bracket. OK for midget sets. Can make a good BC wave meter. Brand new. Secondary 4 ohms.
7-192. Each.... .40

HONEYCOMB COILS.



We acquired some good used HC coils. The readings are for a .001 mfd. or 3 .00035 in parallel. You can figure other capacities accordingly. In following sizes:

Turns	mhy	kc.	meters.	net
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
300	5.5	68	4,412	1.60
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	15.	41	7,312	2.05
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
750	37.	26	11,112	2.35
1250	100.	16	18,750	3.00

INTERMED. FREQ. TRANSFORMERS.

About 175 kc. for older Superhet circuits. Used but OK. For experimental or replacement. About 2" dia. In Bak. cases. 7-[illegible]

MRL #7 LOADING COIL. 7-106. Wound on 2XM Celluloid form is $1.00. On Bakelite $1.50.

RF Chokes for #8 Xtal set. 700 or 1000 ohms DC. Hi-inductance works better. 6-11. 4 oz. .35

NEW PRICES ON 2XM. P2XM. CEMENTS

MRL 2XM 2" Cell. forms. CAT. F-5, put price at 35¢, less the cement. Tiny bottles priced out of the market- higher than 1 oz.

MRL P2XM 2" x 2" Cello. forms. at 20¢ each; 2 for 35¢, with no cement.

All MRL Cements and Thinner at 25¢ per oz.; 2 oz. 45¢. CAT. R-1

NEW PRICE ON COIL TUBING. E-3.

Prices remained same for years but now have advanced. Ones not listed same as CAT. E-3. Per in.

1½"	Bakelite.....7-69.	.14
2	" .....7-167.	.16
3	" .....7-67.	.22
1"	Fibre.....7-68.	.06
2"	" .....7-66.	.09

Following used tubing. 3¼" dia. x 3½" long, Hard rubber. .15
3-3/4" x 2½" long, Bak. .10

WHO NEEDS MILES OF WIRE?

MRL sells it by the 100 ft. See CAT. E-3 for other prices.

NEW WIRE PRICES.

16	DCC. 7-126. Per foot....		.03
20	Enamel. 7-74. Per 100 ft.		.45
22	" 7-75. " "		.35

Switches

NEW TOGGLE SWITCH PRICES. E-4.

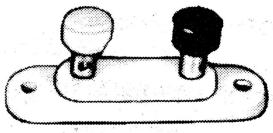
Following prices have to be changed. Others in CAT. E-4 will remain same until notified.

SPST Toggle. 23-1.....35
DPST Slide. 23-5.....30

PORCELAIN KNIFE SWITCHES.

Hook a SPST to each Aerial and throw any in or out. Excellent 4 experiments and quick hookups.

SPST.	1-circuit.	12-12.	4 oz..	25
SPDT.	2-aerials.	12-13.	"	.35
DPST.	110 line.	12-14.	6 oz..	40
DPDT.	Reversing.	12-15.	"	.45



TWIN BINDING POSTS

All Molded Plastic. Both posts completely insulated. Mounting centers 1 13/16". Base is 2 3/16" long, 11/16" wide. Supplied with red and black knobs. 4-11. Double BP .15

INSULATED BINDING POST TERMINALS

Molded plastic. Same as above.

Knurled grip, removable head. Hole provided in stem for wire or phone tip connection. Overall length when fully opened 1". Supplied with hex nut and solder lug. Available in red, black, pink or yellow.

4-12. Midget BP. State color .09

1¼" Red Bar knobs. .20

Transformers

TRANSISTOR P-P INPUT TRANSFORMER

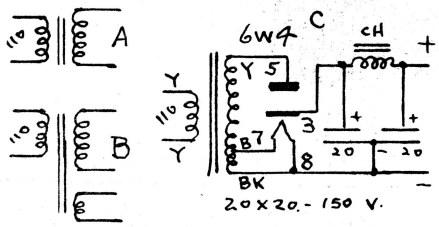
Only 3/4" square and 1" high, with mounting clip. In aluminum case with long lugs. Primary 10 ohm DC; sec. 20 ohm DC C-tapped.

24-32. TRX P-P Input Trans. 1.00

See CAT. sec. F for more Transistor transformers.

USED P-P INPUT TRANSFORMER. In a metal can. 1 only. 2 lbs. 1.00

POWER TRANSFORMERS
Don't forget postage.



Isolation Transformer. (B or C) Prevents shock from chassis-110. Sec. 145 and 6.3- 1 amp. Used in DP-31 set. May use 6 v. rectifier tube, Sel. rect. or Diode rectifier for power supply.
24-23. Isol. Trans. 1½ lbs. 2.00

2½ v. Fil. Trans. (A) 2½ amps. Well built. For 2½ v. AC tubes.
24-22. 2½ v. Fil. Trans. 1#1.50

Heavy duty Output Trans. (A) 8000 impedance. For almost any power tube. Used. 1 lb. 1.00

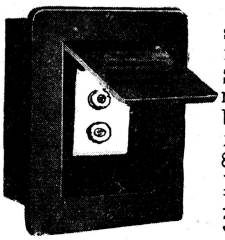
50 Ohm Output Transformer. (A) Good for feeding output into the phones. Imp. about 2500 on pri. Thordarson. 24-15. 1 lb. 1.00

Other outputs - see CAT. Sec. N.

4:1 Audio Transformer. (A) May be used in TRX circuits, or general 3:1 circuits. 24-16. 1.00

Electrical

FLUSH FUSE BOX CABINET.



With two Fusestats. Can mount in shop on wall. Saves running to meter box if you blow a fuse. The front panel 7"x 8½" and 2½" deep For 2 or 3 wire lines. Reg. $10. 3½ lbs.... 2.00

ELECTRICAL APPLIANCE PLUG.

Fits most irons, toasters, waffle irons, etc. For round or flat prongs. 11-30. Special .10

CORD for above, or for soldering irons. Asbestos covered. Very flexible. 20-19. Per foot .05

ATTACHMENT PLUG for appliance cord. Sturdy Bak. 11-22. .15

IRON CORD & PLUG. New material made up 6 ft. long. Fits any appliance prongs. 11-11. .60

ELECTRIC CORD & PLUG. 6 ft. long to fit onto your AC Radio and other uses. 11-10. .40

Antennas

4-SET TV ANTENNA COUPLER.

Couples 2 to 4 TV sets to one Aerial. Excellent for apts. Slightly used but good condition. It usually sells for around $5.30 net. Special 2.50

TELCO TV MAST BASE.

Holds TV mast to roof. Adjustable to all angles. 1 only. 1 lb. wt.....60

Put up those Aerials this summer. It is our biz to compare competitors' prices, so we are passing it on to you:

Aerial Wire	A-Co.	B	C	MRL
#12 Enam.	2.28	2.30	2.23	1.75
#14 "	1.41	1.62	1.56	1.25
7/26 Tinned	1.00	1.00	——	1.00
Ant. Kits	1.08	——	1.00	1.00

Need we say More?

WIRE REELS FOR YOUR ANT. TAKEUP.

Altho these cost us 50¢, we will sell them for 25¢, plus pp. for use in taking up slack on Ur rope for Aerial, in case you let it up and down. Usually about 6" in dia. and sturdily made.

#8 SOLID ALUMINUM GROUND WIRE.
Run from lightning arrester to ground rod to carry hi-current. Excellent for other grounds and Xmtg. coils. 1-44. Ft. ½ oz. .05

ODD LENGTHS OF AERIAL WIRE.

End of reels may give us some odd pieces. Will clear them at 25% discount, as follows:

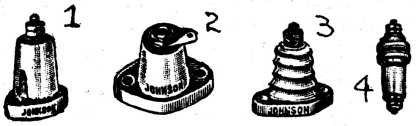
#16 Solid Enam. 21 ft.....15

SHORT AERIAL IN THE CITY.

When making up DP-22 and 22-A we said "long in the city; small in the country." This was reversed. We have had no comments from the Fans - so we figured U understood.

Add postage. Also 4% sales tax if you live in California.

Insulators



PORCELAIN STAND OFF INSULATORS.

Hi-glaze porcelain; long leakage path; freedom from moisture absorption. n.p. brass hardware.

(1) **Junior Pete.** Next size in screw top. 1-3/8" overall; 3/4" base. **12-9. 2 oz. wt.** .12

(2) **Banana Jack type.** Banana plugs fit into them. 1-1/8" overall; 1" base. **12-3. 2 oz. .16**

(3) Beehive type; Banana jack. 2" overall; 1½" base. Petticoats give extra resistance to leakage of HF currents. 12-7. 4 oz. .25

(3) Beehive; Fahnstock clip. Same size. 12-8. 4 oz. wt. .23

(4) POR. FEED-THRU INSULATORS.

Long	Hole	Panel	CAT.	wt.	Each
1-5/8"	5/16"	1/4"	1-30.	2	.15
2"	7/16"	1/2"	1-31.	4	.20

UNCLE SAM'S POSTAGE.

In response to our complaint, about postage rates, one clerk said "we'll have it all soon." And he wasn't just "woofin!"

QUESTIONS and CORRESPONDENCE.

Please send stamped postal, or stamped envelope when expecting an answer. We give our time - U furnish postage. OK? Otherwise, we'll have to delay the answers. Usually our desk is 6" high with letters - but we eventually get around to all of them.

ALSO - when asking questions - leave a blank after each question so we can quickly fill it in. We thank you very much. Then MRL will give it his attention.

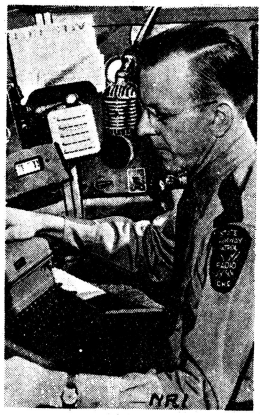
SHORTAGE ON POSTAGE.

Some pile a stack of coins in an envelope and old MRL has to dig up the extra postage. You can strap about 9 dimes onto a light card with cello. tape for 1 oz. postage, but mark it "hand stamp"

NEW MRL HB-11 now ready. --

RADIO OPERATING as a CAREER.

50¢ Postage 3¢.



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While this new MRL Handbook favors Radio Operating aboard ship - it goes into dozens of other branches of operating.

The FCC license is the "door opener" to all Radio communication jobs. This Handbook stresses the acquisition of this by steps - and what jobs you can do with each element of progress.

You are carried along from the rank beginner up to the Commercial licensee with top wages. Even tho you have a low-grade license, you can profit immeasurably from this Handbook.

It has been one of the hardest we ever tackled - due mostly to the extensive Communications field, with its dozens of large branches. As an example, in the mobile branch alone, there are over one million licenses.

While Radio jobs may often be hard to find, it is possible you may inquire into just the right job - by a hint from this HB-11. It also gives you a lineup on what pay to expect.

MRL HB-11. 2 oz. postage.... .50

NEW 6-32 HEAD TOP SCREWS FOR BP.

We have obtained some 6-32 by 1/8" binding head machine screws to replace our ¼" HT screws. Work better than ¼" sizes. May screw by fingers or screwdriver. Also work good on terminal strips and under-panel wiring. Many uses.

Good price. 13-173. Dozen .10

COMPLETELY NEW

DP-18. MRL QRM Coil Transistor Set. We stumbled onto this new arrangement for the most selective Xtal set you've seen. By using 2 QRM Coils- you can sharpen up the stations at will- and get many you never heard on a Xtal set. As a boost to the Xtal diode detector - we added a Transistor amplifier, using 2 pencells for power. Volume controlled. All on a 4x5 panel with base. Very easy to build. Also details for using the QRM Coil in its many ramifications for cutting out stations or boosting them in.

DP-27. MRL #15 Crystal Set. It has been completely re-vamped from the original, that used to sell for $12, all over Oakland, Calif. A most efficient set, as several methods of controlling selectivity may be used. Good for city or country. An entirely new coupler, of Bakelite, has been designed - having a controlled rotor at each end and a tapped secondary. Also built on a much smaller panel - 5½x8. An adjustable Steel galena, or fixed Diode may be used. Lots of fun.

SUBMINIATURE POCKET TESTER.

Pocket size 3"x 4"x1½" deep. Neat metal construction. Ideal for TV, Radio or sound Technician in shop or on calls - Experimenter, etc. It uses the bridge principle with Neon indicator, instead of an expensive meter. It is accurate enough for most uses.

There are many uses including:

Voltage tester from 70 up to 50,000 v. AC-DC.

Audio Signal Generator approx. 1000 cycle note, that may be varied.

Signal Tracer for all stages of TV or Radio.

TV Automatic Gain control voltage substitution tester to control picture quality.

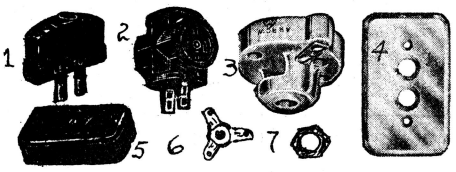
Leakage & Short tester for condensers.

Continuity tester for various parts and circuits.

Visual Output Indicator. Connect plate of the last tube to chassis for testing strongest output of amplifier.

Code Oscillator. May be connected as Audio generator with a key in series for practice.

Eby Pocket Tester. 20-22. 1# 5.95



(1) Attachment Plug. Solderless type. Wire held by prongs. Directions given. 11-28. .05

(6) Crowfeet. Fixture studs. Many uses. Fit 3/8" x #24 thread pipe. Can be used as base to hold bench lites. 11-19. Each .05

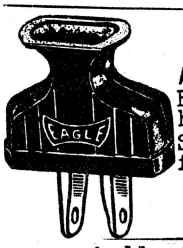
(7) 3/8" x 24 hex. nut. For lamp fixtures, conduit, etc. Use around shop. 13-170. Dozen .10

(2) Cube Tap. 3 connections to AC wall recep. 11-29. 4 oz. .15

(3) Por. Cleat Rosette. Hangs lights from ceiling in Shop or cabin open work. 11-46. 4 oz. .05

(4) Brass Switch Plates. Push switch only. 11-48. Single. .05
11-49. 2-gang. .10

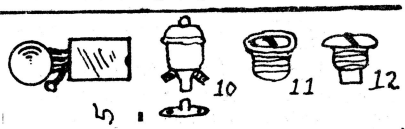
(5) Outlets. Screw on wall and wire tacks along baseboard. Very handy in shop. 11-52. Single .10
11-53. Double .15



New Flat Bakelite Attachment plug cap. Best made. Easy to handle. A sure fit. Spring plugs. Wires fit solidly.

11-22. 2 oz..... .15

For bell-ringing trans. p. N-1



(5) 2½" Electric Bell. For 10-16 v. AC trans. Will also work on 1 dry cell or 2 in series. In neat grey box. 12-10. 8 oz. 1.00

(10) Floorlamp sockets. Go on top of floorlamp to hold shade & 2 sockets. Previously sold for 60¢ in store. 11-36. 6 oz. .25

(11) House plug fuses. Standard 15, 20 or 30 Amp. 11-23. Ea. .06

(12) Appliance fuses. Universal appliance, percolator and many others. 11-27. Each .05

WATCH FLYER FOR MORE KITS.

SMALL CAMERA TRIPOD.

Used, but good condition. Made of Mahogany and brass fittings. Unfolds to 4½ ft. and down to 30". When folded up, it measures 16" and weighs 2½ lbs. Real neat for the small photographer. New- is about $10. Special at 3.95

ACORN SOCKETS .40

NEW STOCK OF BURGESS BATTERIES.

No better made - and the Hams all agree. Refer to CAT. F-3. #2 Burgess cell. 3-1. 4 oz. .20

Burgess pencells, substituted for Eveready. Latter cannot be soldered on negative side without becoming intermittent. Burgess solder right to zinc. Price is same as CAT. 3-7. No. Z .15

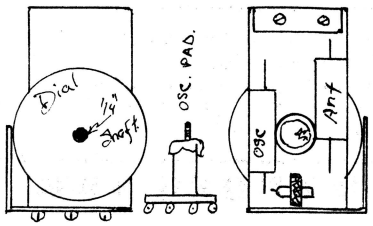
Now a smaller pencell in Burgess. #7. 3/8" x 1-3/4" long for you midget mfrs. 3-14. #7... .15

OLD ALUMINUM PLATES. .009" thick

Rather than throw them away - we decided to give them to anyone sending in an order. Sizes up to 10x12". May be used for shielding if you bolt to them. Not sent without another order. Please give size desired. Tks.

kits

SUPER-HET. TUNER ASSEMBLY.



Assembly is made up of a dial that tunes Ant. and Oscil. coils by slug-tuning. A padder coil is also furnished. 2 trimmers tune up the circuit. Schematic shows how to build a 5 or 6 tube Super het of conventional design. You furnish small parts and go on to 455 kc IFT, which we have in stock. For the higher advanced Fan who'd like to build himself a Super-het. Only 1 assembly in stock. Ship. wt. 1 lb. 2.95

MOSCOW ON MRL #10-A CRYSTAL SET.

We are getting some good DX reports on this set. The 10-A, with the selective coil that is usually furnished with the kit, isn't meant for a DX set. It is more for City reception. However - here is a real good Dx list from our good friend Clifford Brown, 231 Concession St., Kingston, Ont., Canada. He uses a Crystal Diode with the 10-A and a 100 ft. Aerial. "Clif" has been a good customer of MRL for over 2 years. Here is his list, received last winter:

Call.	Station	Miles
	Moscow (1 hour).....	7000
	BBC, London (every night for 1 hour)..	5200
WLWO,	WCKY Cincinnati.....	800
WWVA	Wheeling, West Va....	500
WKJD	Fort Wayne, Indiana..	500
WJJD	Chicago, Ill.....	600
CFCO	Windsor, Ont.....	350
CKLW	Chatham.....	300
WQXY	New York.....	200
CHOL	Montreal.....	200
WSYR	Syracuse.....	200
WWNY	Watertown, N.Y.....	175
CBL	Toronto, Ont.....	165

Also amateurs in N.Y., Ont., Que., Me., Ohio, Pa.; Ships on the Lakes; planes at Ratcliffe airport, Ottawa, and locals.

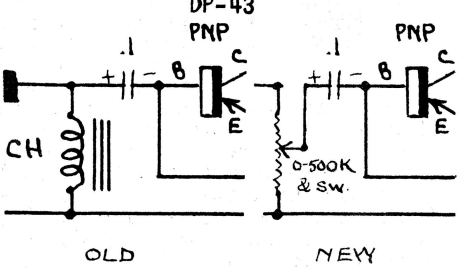
We have had some Fans, located in remote poor receiving locations, that got poor volume on some stations, while others were smaller stations that came in better. This is a characteristic of reception in remote places. If you are away from any powerful stations, you may get a #10 coil, with large primary of 160 turns, and use it in place of the regular #10-A coil. The connections are the same otherwise. It will give closer coupling and it should bring in more DX stations than the other. Or, you may rewind the present one, as per DP-34, Country Set. A new coil will cost $1.50 from us.

As said on DP-34 - the #10 was fine around Reno, with only a few stations. Here it is a different matter, as we are close to KNBC and other hi-watters with a strong ground wave. The coil may be changed without disturbing the balance of the set. The coils and set were designed with this in mind - using the same switch points, layout, etc.

If you want closer coupling with the present #10-A coil- you may unwind the 30 turns #26 en. and scatter it over the primary. This will give your closer coupling.

If ordering the new coil - be sure to state you want the broad tuning one for the Country. 1.50

BIG CHANGE IN #26 CRYSTAL SET.



Our policy is to make changes for the good, regardless of its cost or inconvenience to us. We reasoned that the selectivity of #26 All-wave Crystal set should be improved - especially after working it on our large Aerial & ground. Volume was also too much.

The original Audio choke tended to short the tuning circuit & caused it to tune broadly. This is swell in the Country- but not so good in crowded areas. So we decided to add a lot of resistance across the circuit.

This changed the choke to an 0-500K vol. control and switch. An 0-1 meg. or 0-100K will also work good. This sharpened it up FB and also gave a control of the volume - as loud stations blasted your ears. Now you may control it at will - and bring the station down to best tone & volume to suit you.

As for the switch on V.C. you can use this for the battery sw. and eliminate the SPST toggle. It will fit the same hole OK.

All kits coming out now have this change. Price is the same, as the parts about balance. But DP-43 will be the same as the old, but you can pencil it in as shown above. There will be a delay in making a new DP-43 - as this requires a whole new plan.

Here are a few reports:

Fred Specht, Calif.: (On #26 we wired, using new VC) "Received Ur Diode-Transistor set and thanks for nice job of wiring, etc. I have 200' of Ant. strung up a mountain 75' high and ground. I get Ft. Bragg (10) 250 watter on low volume. At night I get KEX (600); Chico (125); lots of stations not identified."

WATCH FLYER FOR MORE KITS.

IF YOU HAVEN'T RECEIVED a new catalog

within the last SIX MONTHS - ask for a new one. 10¢ mailing appreciated, but not required.

As most of you know, the Flyer represents only a small part of our stock. Most staple items are later transferred to our 24 page CATALOG when possible.

30 YEARS of PROVEN DEPENDABILITY

NEW INSURANCE RATES:
For parcel post. 0-$10 - 10¢; $10.01-50 - 20¢. Add to cost.

STAMPS ACCEPTED:
When ordering, we can use all U. S. gummed stamps, of any denomination except Special Delivery, at full face value. You can load up your letter at no cost for a money-order or Cashier's check.

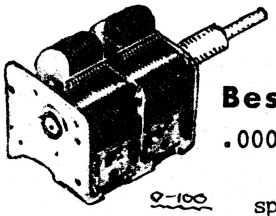
CANADIANS
buy for less, even after paying duty, tax and postage. [illegible] on paper bills. 10% discount taken on silver.

DO NOT ADD CREDITS:
Order blank, with your latest order, shows balance. Do not add up your past credit slips.

Don't Hesitate . .

[illegible] MRL

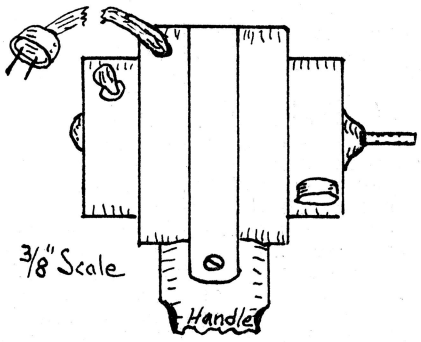
. DO IT NOW!



SPECIAL
Best *DEAL* in
.00035 CONDENSER

9-100 Due to our special buy we can offer these 2-gangs at a very low price. New; in original boxes. Well made. Size 2 x 1½ by 2¼" deep. OK for base mounting. Has 3/8" shaft for 1"; then ¼" shaft for 1". 8-86. 10 oz. .98

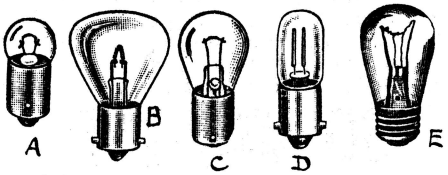
USED POLAR CUB (Gilbert) MOTOR.



Many uses around shop or home. 110 volt; AC or DC; 60 cycles or less. Good speed. Toggle switch on motor. 3¼" dia.; 4" long with ¼" shaft. 5" handle may be removed. With 8 ft. cord and plug.

Polar Cub Motor. Wt. 3 lbs. 2.50

CLOSEOUT ON LAMPS



(A) 6-8 v. #63 dash. Bayonet single contact type. Each .15
(B) 6-8 v. headlite. Bayonet, 2-contact, 32 cp. Lot of 3 includes one good; 2 with 1-side out. For the lot of 3 .50
(C) GE #1678. 48 v. Bayonet, 2 contacts. Each Lamp .25
(C) GE-1154. Headlite, 6 volt, 2-contact bayonet. .35
(D) 110 v., 100 watt projection lamp. Single contact, bayonet socket 5/8" diameter. Lamp is 3" long. 1 only in stock .75
(E) 110 v., 100 watt projection lamp. #8-A. Takes regular 110 v. socket, 1 only at .75

LOW PRICES!
QUICK Service!

53¢ A WEEK! Every week send 53 cents for an MRL Handbook. It'll take that long to digest it and you'll be glad you did.

CRYSTAL SETS

PHILMORE FIXED CRYSTAL DETECTOR.

A real rugged Xtal, in Bak. case. Sensitivity determined by Lab. methods. Renews life of reflex or Xtl sets. Very sensitive. List price $1.20.
9-56. Philmore fixed Xtal.....90

A NEW MRL DETAIL PRINT.

DP-44. MRL #29 Variometer Xtal Set. Full sized drawing of Variometer, plus 6 other drawings of all details. Different than the original #29, and a lot better. Also #29-A is a revision of an old selective circuit that is also easy to build. Many more possibilities for experiments.

MRL VARIOMETER. A new item for #29 and 29-A circuits, as well as general exp. 7-194. 1 lb. 2.50
MRL #29 Loading Coil. For DP-44 circuit. 7-160. 8 oz. .75
MRL #29-A Coil. Coil for the 2nd circuit of #44. 7-193. 1.50

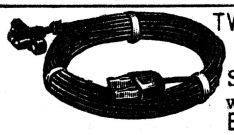
ERROR! Peppy Pal Reflex Kit is $2.59 instead of 2.29. Wired is OK at $3.59. (See CAT. F-7.)

GE TRANSISTOR MANUAL. 3rd Edition

168 pages. Valuable data on circuits, theory, applications, substitution chart, etc. Plastic binding. Reg. $1.00 12 oz. .75

Just hanging around with nothing to do?

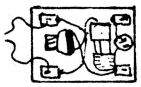
Make up some 6" test leads of test prod wire and alligator clips. Then, get that box of Radio parts - - -and start "hooking." There is nothing that whets a Radio man's appetite like "- well, let's try it over here and see what happens." No books to study - just a few fundamental circuits. Eventually you'll run onto an unpublished circuit. And it'll keep you occupied, instead of going around kissing girls! (Oh! My! What am I saying?)



TV CHEATER CORDS. Fit into TV Set and into 110 wall receptacle. Each .50

9-14 KNOCKED DOWN STANDS now .25

KITS & CONSTRUCTION.



PEPPY PAL
X-LESS AMPLIFIER.

On base 1½ x 2. Very neatly wired. Uses current from receiving station for power. Cheaper than parts alone. Completely wired. tested. 14-17-W. ppd. 2.50

MRL 1-tube Kit. Please! We do NOT furnish a tube with the set - as some have expected. CAT. page K-3 says "Following accessories are extra." Please observe. Thank you.

BASE TO PANEL BRACKETS.

One set 2" high x 4" long, of black Iron. Set of 2 only... .35
One set steel 2" high x 5" to back. for 2 brackets.....35
One set heavy Aluminum 1½" hi. x 3½" to the back. For 2.....25

PRINTING.

Refer to CAT. 0-2. We have a new setup on printing as our old printer has about given up! Hi. No more envelopes, calling cards or Monogram note paper.

Our new labels look like the following. 50¢ per 500; 4 lines.

> Modern Radio Labs.
> 1131 Valota Road
> Redwood City, Calif.

Also Country Club labels at $1.50 per 500, with a gold border and in a plastic box.

White Bond paper - 50 sheets - 25¢, plus postage.

DO ORDER NOW
(avoid disappointment)

If you haven't ordered from us within the last 6 months - you better "git to gittin'." We appreciate any size order - and it will keep you on our list to receive Flyers and DS as they come out. Make up an order now!

NO SERVICE CHARGE ON LITERATURE.

As literature is not handled like parts, we put no minimum on literature. 25¢ service charge on parts orders under $1. This charge may be applied to any future order for literature or parts for $2 or over.

BLANKS in FLYER and CATALOG.

As this is the "space age" - Fans want to know why certain spaces didn't print! Well, the item is SOLD OUT. It is easy to delete items from our metal litho. plates but not add them. If enough deletions - a new plate.

COD's are now held by the P. O. for 30 days instead of 15.